

REMARKS

Claims 1-8 are pending in the instant application. Claims 1-8 have been rejected by the Examiner. Claims 1 and 5 have been amended. The Applicant submits that claims 1-5 are in condition for allowance and respectfully requests reconsideration and withdrawal of the outstanding rejections. No new matter has been entered.

Claim Rejections Under 35 USC §102

Claims 1 and 2 have been rejected under 35 U.S.C. 102(b) as being allegedly anticipated by U.S. Patent No. 6,327,423 to Ejima. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The Applicant respectfully traverses the outstanding rejections of claims 1 and 2 because Ejima does not teach or suggest each and every feature recited therein.

The claimed invention relates to an image signal processing system capable of maximizing dispersion of image data in order to readily discriminate a shape of an object even in a low brightness environment. The maximization of dispersion of image data is achieved by a variable gain amplifier for variably amplifying an output signal of an image sensor, a first A/D converter for converting an output signal of the variable gain amplifier into a digital signal, and a second converter for converting the output signal of the image sensor into a digital signal to control the first A/D converter and a shutter. By contrast, Ejima discloses an image signal processing system (e.g., an electronic camera), which simultaneously performs photographing and recording operations, wherein a recording time can change by a simple manipulation. Therefore, the teachings of Ejima are directed to an entirely different matter than those disclosed and recited in the instant application.

In particular, with respect to claims 1 and 2, the Examiner states that the image sensor (21 and 31) of the present application is anticipated by the image sensor disclosed in Ejima (i.e.,

CCD 20 and photometric device 16). The Examiner further states that the recited variable gain amplifier (22 and 32) is anticipated by Ejima's image processing unit 31. In addition, the Examiner states that the recited first A/D converter (23 and 33) is anticipated by the A/D converter 32 of Ejima, and that the recited second A/D converter (25 and 35) is anticipated by the photometric circuit 51 of Ejima. Finally, the Examiner states that the recited image data processor (24 and 34) is anticipated by the DSP 33 and CPU 39 of Ejima, respectively. Although Ejima discloses that the image processing unit 31 samples the image signal output from the CCD 20 under the control of the CPU 39 and amplifies the sampled image signal to a predetermined level, it fails to describe that the *image processing unit 31 variably amplifies the image signal* as recited in amended claim 1. No new matter has been entered by the amendment. Support may be found, e.g., throughout the Applicant's specification and drawings and, in particular, column 5, lines 56-65. Assuming, *arguendo*, that the image processing unit 31 of Ejima could variably amplify the sampled image signal, the CPU 39 controls the image processing unit 31 depending on a color temperature applied from the colorimetric circuit 52. On the other hand, the image data processor 24 and 34 of the claimed invention detects the output signal of the first A/D converter 23 and 33 and changes an amplification gain of the variable gain amplifier 22 and 32 on the basis of the detection result. Accordingly, the variable gain amplifier 22 and 32 of the claimed invention is easily distinguished from the image processing unit 31 of Ejima.

In addition, the color temperature adopted in Ejima relates to a white balance of an image, and does not have any relationship with the gain for controlling the optical amount described in the present application. Furthermore, the photometric circuit 52 of Ejima receives an analog signal not from the CCD 20 but from the photometric device 16 to convert it into a digital signal, whereas the second A/D converter 25 and 35 of the present application receives the output signal from the image sensor 21 and 31 to convert it into a digital signal. For at least these reasons, the Applicant submits that claim 1 is not anticipated by Ejima. Claim 2 depends from what should be an allowable base claim. For at least this reason, the Applicant submits that claim 2 is in condition for allowance. Reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Claim Rejections Under 35 USC §103

Claims 5 and 6 have been rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Ejima in view of U.S. Patent No. 6,587,144 to Kim. In addition, claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Ejima in view of U.S. Publication No. 2005/0062874 to Shiga. Further, claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Ejima in view of U.S. Patent No. 6,366,228 to Nagata. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). The Applicant respectfully traverses the outstanding rejections of claims 3, 5, 6, and 7.

With respect to claim 5, the Examiner states in the Office Action that claim 5 differs from claim 1 only in that the limitation "a direct current offset controller" is additionally recited, and Kim allegedly teaches a direct current offset controller (CDS circuit 100) for controlling direct current of offsets of output signals of the image sensor under the control of an offset control signal. However, as described above with respect to claim 1, Ejima does not teach the features recited therein, including the *image processing unit 31 variably amplifies the image signal*. Kim is directed to solving problems of the offsets generated in an A/D converter by performing a black level clamping for digital signals. The DC offset controller 37 of the claimed application controls the DC offsets in response to the offset control signal (SOC) applied from the image data processor 34. On the other hand, the DC offset controller of Kim uses a black level clamp circuit 400 other than the DSP to control the DC offsets. For at least this reason, the Applicant submits that claim 5 is patentable over Ejima in view of Kim. Furthermore, although the AGC circuit 200 of Kim is constructed to automatically control the gain of the output signal of the CDS circuit 100, the gain is variably controlled under the control of the image data processor 34 according to the claimed invention. Consequently, the Applicant submits that claim 5 is

sufficiently distinguished from Ejima and not obvious in view of Kim. Claim 6 depends from what should be an allowable base claim. For at least this reason, the Applicant submits that claim 6 is in condition for allowance.

Claims 3, 4 and 7, 8 depend from what should be allowable base claims 1 and 5, respectively. For at least this reason, the Applicant submits that claims 3, 4, and 7, 8 are in condition for allowance and respectfully request reconsideration and allowance of the outstanding rejections.

CONCLUSION

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested. It is submitted that the foregoing amendments and remarks should render the case in condition for allowance.

Accordingly, as the cited references neither anticipate nor render obvious that which the applicant deems to be the invention, it is respectfully requested that claims 1-5 be passed to issue.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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